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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,518	02/23/2004	Robert Rex Rice	038190/274396	1510
826	7590	12/13/2005	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			VY, HUNG T	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

2/1

<b>Office Action Summary</b>	Application No. 10/784,518	Applicant(s) RICE, ROBERT REX	
	Examiner Hung T. Vy	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/23/2004</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 2/23/2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,724,792. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in present application are similar to claims in U.S. Patent as shown.

Present invention claims  
Claim 1

U.S. Patent No. 6,724,792  
1 and 7

### Claim Rejections - 35 USC § 102

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3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4-5 are rejected under 35 U. S. C. § 102 (b) as being anticipated by Patel ( U.S. patent No. 6,151,341).

With respect to claim 1, Patel discloses a method for removing at least one of a plurality of removable linear laser diode bars (105, 106, 107..) from a laser diode array, comprising: accessing a removable linear laser diode bar (105,106,107..) within the laser diode array (see fig. 6), wherein the laser diode array (105,106,107...) comprises the plurality of removable linear laser diode bars (see column 2, line 51 and fig. 6) and a plurality of spacers (82,83,84 and 85) with each removable linear laser diode bar being disposed between a respective pair of spacers (see column 2, line 50); slideably removing the removable linear laser diode bar (105,106,107 or 108) from between the respective pair of spacers (82,83, 84 and 85) (see fig. 6) in the laser diode array without breaking a mechanical connection between the removable linear laser diode bar(105,106,107 or 108) and the respective pair of spacers (82,83, 84 and 85) (see column 2, line 56-68); and maintaining a predetermined spaced apart relationship between the respective pair of spacers to facilitate subsequent insertion of a replacement linear laser diode bar (105,106,107 or 108)(See fig. 6).

With respect to claims 4-5, Patel discloses slideably removing the removable linear laser diode bar (105,106,107 or 108) from between the respective pair of spaces

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(82,83, 84 and 85) comprises applying a force to the removable linear laser bar in direction away from the plurality of spacers (see fig. 6) and overcoming a frictional force between the removable linear laser diode bar and the respective pair of spacers (82,83, 84 and 85) because in order to get electronic connection through the laser bar (see fig. 8).

### **Claim Rejections - 35 U.S.C. § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, and 3 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Patel (U.S. patent No. 6,151,341) in view of Rice et al. (U.S. Patent No. 5,495,490).

Regarding to claims 2, and 10, Patel discloses all limitation of claimed invention recited in claim 1 except for housing and immersion cooled. However, Rice et al. discloses housing (42) and at least partially draining a liquid coolant from the housing from the housing prior to opening the housing (42). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Patel's laser diode array by arranging the housing so that the laser diode can be protected from the heat and when replace the laser diode bar, at least partially draining a liquid coolant from the housing prior to opening the housing in order to get back a liquid coolant and can reuse after replace the laser diode bar since such arrangement of

housing for the started purpose has been well known in the art as evidenced by the teaching of Rice et al. (See fig. 2).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung T. Vy whose telephone number is 571-2721954. The examiner can normally be reached on 8.30am - 5.30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571 272 1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Primary Examiner

Orinhoodent

Hung T. Vy  
Art Unit 2821  
December 11, 2005.

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